



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,205	04/16/2004	Sung-Su Jung	8734.294.00 US	7679
30827 7590 01/12/2009 MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006				
EXAMINER FISCHER, JUSTIN R				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
01/12/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/825,205

Applicant(s)

JUNG ET AL.

Examiner

Justin R. Fischer

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 and 20-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 27, 2008 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As currently drafted, independent claim 18 requires "N syringes" (line 10). The claim further requires that "the syringe including a body portion..." (line 11). It is suggested that applicant amend the claim to recite "each" syringe includes a body portion since the claims initially define an assembly comprising a plurality of syringes. It is additionally noted that the language "the nozzle" is also used in line 22 of the claim.

The claim further includes the language "the syringe" in line 23- it is suggested that the claim be amended to include the language "each syringe".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Yamada et al. (JP 2002-258299, provided in IDS).

The Admitted Prior Art discloses a method of fabricating a liquid crystal display panel by forming a thin film transistor array substrate, forming a color filter substrate, dispensing a material through a plurality of syringes (301A, 301B, 301C) and their respective nozzles (302A, 302B, 302C) onto at least one of the substrates, and joining the substrates (Figure 3; sections [0012, 0016-0017]). The film transistor array substrate has a plurality of liquid crystal display panels and the color filter has a plurality of liquid crystal display panels ([0009] [0010], [0012] and Figure 1). It is unclear as to whether the Admitted Prior Art teaches a syringe having a plurality of nozzles where at least one of the nozzles can move with respect to a position of the body of the syringe where the material can be dispensed from the nozzles at the same time.

Yamada teaches it being known in the art of liquid crystal display manufacture to use a dispensing apparatus comprising a syringe having a body (8) for containing a dispensing material and a plurality of nozzles (10) at one end of the body to supply the material onto a substrate (Figure 1; section [0022] at top of p. 13). At least one of the

nozzles can be moved with respect to the body to adjust the size of a dispensed pattern and the material can be dispensed from the plurality of nozzles simultaneously (Figure 5; portion of section [0010] at top of p. 10; section [0036]). This makes it possible to drop the liquid crystal in a specified pattern and quantity.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a dispensing apparatus where the syringe N has a plurality of nozzles M connected to its body portion such that at least one of the nozzles moves with respect to the body and the plurality of nozzles dispense the material simultaneously when manufacturing the LCD panel of the Admitted Prior Art because such is known in the art, as evidenced by Yamada, where this allows one to drop the liquid crystal in a specified pattern and quantity. In such an instance, multiple nozzles would be associated with each syringe and thus satisfy the claimed quantitative relationship $N \times M$ (e.g. assembly with 6 liquid crystal panel has 3 syringes N with 2 nozzles M each).

One would appreciate using the dispenser of Yamada to drop liquid crystal into the plurality of liquid crystal display panels of the admitted prior art because they are arranged in a pattern and Yamada discloses a dispenser capable of simultaneously dropping the liquid crystal in a pattern.

Lastly, with respect to the independent claim, Yamada teaches connection portion (11) (Figure 1; section [0022] at top of p. 13).

As to claim, the Admitted Prior Art in view of Yamada teaches such.

Response to Arguments

6. Applicant's arguments filed October 27, 2008 have been fully considered but they are not persuasive.

Applicant argues that none of the cited references teach or suggest providing N syringes and M nozzles, wherein each nozzle is moving at the connection portion in at least one direction to align the nozzles of the syringe to the dispensing position in accordance with the size of the liquid crystal display panel.

As detailed in the rejection above, the method of the APA involves the use of a plurality of nozzles (one for each liquid crystal panel). In this instance, though, each nozzle is associated with a specific syringe and thus, each syringe only applies material onto a single crystal panel. Yamada, on the other hand, suggests the known use of a system (in the liquid crystal panel environment) in which multiple nozzles are associated with a single syringe (see Figures). In this instance, the nozzles would be independently movable at the connection portions of each syringe/nozzle assembly.

One of ordinary skill in the art at the time of the invention would have been amply motivated to use assemblies comprising a single syringe with a plurality of nozzles since the environment recognizes such an assembly (would be more efficient) and applicant has not provided a conclusive showing of unexpected results. Given the structure of the APA, modifying the method of the APA would include assemblies defined by a single syringe having a plurality of nozzle attached thereto. Lastly, in view of Yamada, there are only two possible modifications: including multiple nozzles in each syringe of the APA or include assemblies having a single syringe with a plurality of nozzles- the fact

that there are only a limited number of possibilities further suggests that the claimed invention would have been obvious in view of Yamada.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer
/Justin R Fischer/
Primary Examiner, Art Unit 1791
January 9, 2009

Application/Control Number: 10/825,205
Art Unit: 1791

Page 7